Mathematics Toolkit: Grade 4 Objective 3.C.2.a

Standard 3.0 Knowledge of Measurement

Topic C. Applications in Measurement

Indicator 2. Calculate equivalent measurements

Objective a. Determine equivalent units of length

Assessment Limits:

Use 36 inches = 1 yard and whole numbers (0-100)

Table of Contents

Objective 3.C.2.a Tools

Lesson Seeds

Mathematics Grade 4 Objective 3.C.2.a Assessment Limit 1

Activities

Constructing a Yardstick

Construct a yardstick given only an inch ruler and a long strip of paper.

Students will label the yardstick at each foot (12”, 24”, and 36”) and also label 1 ft., 2 ft., 3 ft. and 1 yard. This will show that there is 3 ft. in a yard. They may work in groups or as partners. Students will then measure objects around the room to the nearest foot/yard using their paper strip.

Drawing and Measuring in Inches, Feet and Yards

Create geometric shapes on the black top with sidewalk chalk to the given dimensions in feet or yards. Students will then calculate equivalent measures (in both yards and feet) for their shape. Finally, the students will then measure, using the equivalent measurement, to check their answer.

Example:
Have the students draw a 3 yd. x 3yd. square. After they have completed their drawing have the students calculate the dimensions in inches, feet or both. Then have them verify their answers using an inch ruler or measuring tape.

Measuring "In Between" Lengths

Predict the length of and measure line segments whose lengths are "between" two different whole numbers. For example, students will predict and then determine the length in inches of a given line segment that is between 2 yards and 3 yards. Also, have them determine the length in inches of a given line segment is that is between 1 yard and 2 yards.

Bubble Gum Inches

Students should work in groups of four to complete the following activity. Give each group a 36-inch piece of bubble gum tape (it comes in 6 foot lengths). Have each group determine how many inches of the bubble gum tape each person will need to have an equal amount. (18-inches). Then after they have determined this, students will measure the equal amounts on the tape and distribute the pieces to each member in the group. Each student will then remove 6-inches of his/her bubble gum tape. How much does each of them have left? If they put their strips together now, how long would the new tape be? Put the strips back together and measure the new strip to verify the group conjecture.